



Focus on Disability

Among Maryland Women Giving Birth 2019-2020

Introduction

Disability, as defined by the World Health Organization (WHO), encompasses impairments, activity limitations, and participation restrictions a person may experience in their daily lives.¹ The WHO's International Classification of Functioning, Disability, and Health (ICF) categorizes the many types of disability by those that may limit cognition or emotional capacity, impair vision, hearing, or physical function, and inhibit activities of daily living.²

Approximately 12-18% of reproductive-aged women have a disability.³ Compared to women without a disability, women with a disability are as likely to desire a future pregnancy, be sexually active, and experience pregnancy.⁴⁻⁶ However, women with a disability are less likely to report utilization of reproductive health care and more likely to experience pregnancy complications and adverse birth outcomes.⁵⁻⁸

Pregnancy Risk Assessment Monitoring System (PRAMS)

PRAMS (www.cdc.gov/prams/index.htm), which includes forty-six states, the District of Columbia, New York City, Northern Mariana Islands, and Puerto Rico, representing approximately 81% of all U.S. live births, collects site-specific, population-based data on maternal attitudes, behaviors, and experiences before, during, and shortly after pregnancy.

A supplemental questionnaire on disability was added by selected PRAMS sites and data collection began in 2019 to address the gap in population-based data on disability among women with a recent live birth. This supplemental questionnaire is made up of the Washington Group Short Set of Questions on Disability (WG-Short Set), which address six functional types of disability: remembering, seeing, hearing, communicating, walking/climbing stairs, and self-care.⁹

The WG-Short Set asks six questions about one's ability to do different activities related to the six functional types of disability. Each question has a four-point Likert scale response ranging from having "no difficulty" doing a task to "cannot do [a task] at all." A respondent was marked as having a specific type of disability if she reported having "a lot of difficulty" or "cannot do at all" on that related question. Having any disability was defined as having "a lot of difficulty" or "cannot do at all" on one or more of the WG-Short Set questions.

Prevalence of Disability

The prevalence of any disability among Maryland mothers was lower in 2020 (5.4% CI 3.9–7.4) than in 2019 (7.2% CI 5.4–9.5) and lower than the average response for all twenty states that collected disability data in 2020 (6.7% CI 6.1–7.3). Maryland mothers reported difficulty with remembering, hearing, walking/climbing stairs, and self-care less frequently in 2020 than in 2019 and compared to the twenty PRAMS sites in 2020 (difference for self-care is statistically significant). Difficulty with seeing and communicating were reported more frequently for Maryland mothers in 2020 as opposed to Maryland mothers in 2019 and the twenty PRAMS sites in 2020.

Table 1. Prevalence* of Any Disability[†] and Disability Type[‡] Among People with a Recent Live Birth, 2019–2020

Type of Disability	Maryland % (95% CI)*		20 PRAMS Sites [¶] % (95% CI)*
	2019	2020	2020
Any disability [†]	7.2 (5.4–9.5)	5.4 (3.9–7.4)	6.7 (6.1–7.3)
Remembering [‡]	4.2 (2.9–6.0)	2.6 (1.7–4.1)	3.9 (3.5–4.4)
Seeing [‡]	1.6 (0.8–3.2)	1.9 (1.1–3.3)	1.8 (1.5–2.1)
Hearing [‡]	0.5 (0.2–1.3)	0.3 (0.1–1.1)	0.8 (0.6–1.0)
Communicating [‡]	0.9 (0.4–2.1)	1.0 (0.5–2.2)	0.4 (0.3–0.6)
Walking/Climbing Stairs [‡]	1.0 (0.4–2.1)	0.5 (0.2–1.4)	0.6 (0.5–0.9)
Self-care [‡]	0.5 (0.2–1.8)	0.0 (0.0–0.1)	0.3 (0.2–0.5)

Abbreviation: CI, Confidence Interval

*Weighted prevalence presented

[†]Any disability was defined as having “a lot of difficulty” or “cannot do at all” on one or more of the WG-Short Set.

[‡]Type of disability was defined as having “a lot of difficulty” or “cannot do at all” on each of the individual WG-Short Set.

[¶]20 PRAMS sites that collected disability data and met or exceeded the 50% response rate threshold for 2020: Colorado, District of Columbia, Georgia, Kansas, Louisiana, Maryland, Massachusetts, Michigan, Mississippi, Missouri, Montana, Nebraska, New Hampshire, New Mexico, North Dakota, Oregon, South Dakota, Tennessee, Vermont, and Virginia

Prevalence of Disability by Select Characteristics

Among Maryland birthing individuals who delivered in 2020, 5.4% reported having any disability. Figure 2 displays the prevalence of any disability by select characteristics. In 2020, both Maryland and the twenty PRAMS sites saw the highest prevalence of any disability in the population under 19 years, compared to the 25–34 years and the >35 years age groups. Maryland birthing individuals between 20–24 years of age reported having any disability at half the rate of birthing individuals in the same age group from the twenty PRAMS sites. Black non-Hispanic birthing people had the highest prevalence of any disability among all racial groups in Maryland but had a similar disability prevalence as birthing people in other racial groups within the twenty PRAMS sites. In both Maryland and the twenty PRAMS sites, birthing individuals with some college education had the lowest prevalence of disability compared to birthing individuals with lower educational attainment. Within the twenty PRAMS sites, the difference in disability prevalence is statistically significant between birthing individuals with less than a high school education and with some college education.

Table 2. Prevalence* of Any Disability Among People with a Recent Live Birth by Select Characteristics, 2020

Characteristic	Maryland % (95% CI)*	20 PRAMS Sites [†] % (95% CI)*
Age (years)		
≤19	8.6 (1.7–33.4) ^α	10.9 (7.6–15.3)
20–24	4.7 (1.8–11.6)	9.0 (7.5–10.7)
25–34	5.4 (3.5–8.1)	6.0 (5.3–6.8)
≥ 35	5.4 (2.8–10.0)	5.4 (4.2–6.8)
Race/Ethnicity		
American Indian or Alaska Native, Non-Hispanic	§	10.8 (6.5–17.5)
Asian or Pacific Islander, Non-Hispanic	4.6 (1.3–15.3)	4.1 (2.5–6.7)
Black, Non-Hispanic	7.4 (4.2–12.7)	6.6 (5.4–8.0)
Another Mixed Race, Non-Hispanic	§	6.5 (4.2–9.8)
White, Non-Hispanic	4.3 (2.5–7.2)	6.8 (6.1–7.7)
Hispanic	5.5 (3.0–10.0)	6.4 (5.1–7.9)
Education		
Less than high school	5.9 (2.8–12.3)	9.7 (7.8–12.0)
High school diploma or GED	7.2 (3.8–13.1)	9.2 (7.9–10.7)
Some college or higher	4.4 (2.8–6.8)	5.0 (4.4–5.7)

Abbreviation: CI, Confidence Interval; GED, General Education Development

*; †; § See footnotes from Table 1

^α <60 respondents; may not be reliable

§ <30 respondents; not reported

Prevalence of Selected Indicators by Disability Status

The responses to twelve indicator variables were compared between birthing individuals with any disability and birthing individuals without a disability. The criteria for having any disability was responding “a lot of difficulty” or “cannot do at all” to one or more of the WG–Short Set questions. Although the supplemental questionnaire on disability was officially added to the PRAMS survey in 2019, Maryland began including it in September 2018. The results of the analysis, presented in Table 3, include responses beginning in September 2018 through December 2020.

Twenty-one percent of women with any disability (CI 12.6–29.4) had a household income above the statewide median (\$87,063), compared to 37.7% of women without any disability (CI 35.2–40.3). The difference in household income above the median was statistically significant ($p=0.0014$).

Respondents were asked whether they experienced physical or emotional abuse from a partner/husband or other family member in the 12 months preceding their most recent pregnancy. Slightly over half of women in both disability status groups reported being physically or emotionally hurt by someone close to them ($p=0.3068$, not statistically significant).

Two questions related to breastfeeding were analyzed for differences between women with and without any disability. A majority of women reported ever breastfeeding their baby, even if for a short period of time, regardless of disability status ($p=0.4869$, not statistically significant). Likewise, most women received information about breastfeeding from either their doctor or their baby’s doctor, suggesting that disability status of the mother does not affect receipt of breastfeeding education ($p=0.0596$, not statistically significant).

Table 3. Prevalence[‡] of Indicators by Disability Status[†] Among People with a Recent Live Birth, 2018–2020 PRAMS[¶]

Indicator	Maryland % (95% CI) [‡]		Chi Square p value ^α
	Any Disability [†]	No Disability	
Household Income >Median*	21.0 (12.6–29.4)	37.7 (35.2–40.3)	0.0014
Physical/Emotional Abuse 12 Months Before Pregnancy	58.0 (45.5–70.4)	51.2 (48.1–54.3)	0.3068
Ever Breastfed Baby	88.5 (81.5–95.5)	90.8 (89.2–92.5)	0.4869
Breastfeeding Info Provided by Mother’s or Baby’s Doctor	92.4 (87.8–97.1)	86.5 (84.8–88.3)	0.0596
Intended Pregnancy**	41.6 (31.4–51.7)	61.8 (59.2–64.4)	0.0001
Birth Control Used Prior to Pregnancy	52.8 (40.3–65.3)	44.4 (41.3–47.5)	0.2009
Drank Alcohol During Pregnancy***	9.3 (2.9–15.8)	7.5 (6.1–8.8)	0.5454
Smoked Cigarettes During Pregnancy***	12.7 (5.8–19.6)	4.3 (3.2–5.4)	0.0004
Vaginal Delivery	67.8 (58.5–77.0)	70.2 (67.8–72.6)	0.6145
C-Section Delivery	16.2 (9.2–23.2)	15.8 (13.9–17.7)	0.9202
No Paid Work Leave After Pregnancy	36.1 (22.0–50.1)	40.8 (37.3–44.2)	0.5295
Postpartum Depression	29.0 (19.5–38.5)	14.4 (12.5–16.3)	0.0002

Abbreviation: CI, Confidence Interval

[†]Any disability was defined as having “a lot of difficulty” or “cannot do at all” on one or more of the WG–Short Set.

[¶]The supplemental questionnaire on disability was added to the Maryland PRAMS in September 2018.

[‡]Weighted prevalence is presented.

^αResults were considered statistically significant if the chi square p value was <0.05.

*Median household income in Maryland for 2016–2020 was \$87,063 (in 2020 dollars), U.S. Census Bureau ACS 5–year estimates.

**Pregnancy was considered intended if the respondent answered “yes” to wanting the pregnancy then or sooner, and unintended if the respondent answered “yes” to wanting the pregnancy later, not then or any time, or unsure.

***During the last 3 months of pregnancy.

Pregnancy intention was statistically significantly higher among women without a disability (61.8% CI 59.2–64.4) than women with any disability (41.6% CI 31.4–51.7) ($p=0.0001$). Pregnancy was considered intended if the respondent answered “yes” to wanting the pregnancy then or sooner, and unintended if the respondent answered “yes” to wanting the pregnancy later, not then or any time, or unsure. While the difference in pregnancy intention between the two groups is statistically significant, there is no statistically significant difference in the use of birth control prior to pregnancy ($p=0.2009$). Around half of women in both groups reported using birth control.

Nine percent of women with any disability and 7.5% of women without a disability reported drinking alcohol during the last three months of pregnancy ($p=0.5454$, not statistically significant). Also in the third trimester, 12.7% of women with any disability (CI 5.8–19.6) and 4.3% of women without a disability (CI 3.2–5.4) reported smoking cigarettes ($p=0.0004$). The difference in cigarette use is statistically significant.

The proportion of women who delivered vaginally or through Cesarean section (C-section) did not differ significantly by disability status. Sixty-eight percent of women with any disability delivered vaginally compared to 70.2% of women without a disability ($p=0.6145$, not statistically significant). Likewise, 16.2% of women with any disability delivered via C-section versus 15.8% of women without a disability ($p=0.9202$, not statistically significant).

Over one-third of women said they had no paid leave from work following pregnancy ($p=0.5295$, not statistically significant). The presence of postpartum depression in women with any disability (29.0% CI 19.5–38.5) was almost double that of women without a disability (14.4% CI 12.5–16.3), which was a statistically significant difference ($p=0.0002$).

Conclusions

In both 2019 and 2020, difficulty remembering was the most commonly reported type of disability for Maryland birthing individuals (4.2% and 2.6%, respectively). The prevalence of any disability among Maryland birthing individuals in 2020 of 5.4% was lower than the average of 6.7% for all twenty states that administered the PRAMS supplemental questionnaire on disability in 2020. In this sample, Black non-Hispanic birthing people reported a higher prevalence of disability than their White non-Hispanic counterparts. Nationally, though, Black non-Hispanic birthing individuals reported any disability at approximately the same rate as White non-Hispanic birthing individuals.

The presence of any disability was more frequently reported in teenage birthing people and those without any college education. In the sample of Maryland women who gave birth between September 2018 and December 2020, a statistically significantly greater proportion of birthing people with any disability had an annual household income below the statewide median. Breastfeeding and breastfeeding education occurred at similar rates for both disability status groups.

Maryland birthing individuals without a disability reported that their pregnancy was intended statistically significantly more often than birthing individuals with any disability, although the use of birth control did not vary much by disability status. The use of alcohol and cigarettes during the last three months of pregnancy were low for both groups, but women with any disability reported smoking during this time three times more often than those without a disability. The rates of vaginal and Cesarean delivery were approximately the same for women with and without any disability.

Over one-third of women from either group reported having no paid lead from work following delivery of their baby. Finally, women with any disability reported having postpartum depression at a rate twice that of women without a disability.

Healthcare providers in Maryland should be aware that some variables analyzed in this report may disproportionately affect Black non-Hispanic birthing people at a higher rate than their White non-Hispanic counterparts because of their higher reported prevalence of any disability. Extra consideration should also be given for teenage birthing people, those with lower educational attainment, and women who live in lower-income households. Education about the risks of smoking during pregnancy should be targeted toward pregnant women with any disability, and safe alternatives should be made available to improve birth outcomes. It is important for healthcare providers to recognize that new birthing individuals with any disability report postpartum depression at a higher rate than those without a disability and should offer treatment and resources more frequently to this population, as a precaution.

PRAMS Methodology

Data included in this report were collected through the Pregnancy Risk Assessment Monitoring System (PRAMS), a surveillance system established by the Centers for Disease Control and Prevention (CDC) to obtain information about maternal behaviors and experiences that may be associated with adverse pregnancy outcomes.

Each month, a sample of approximately 200 Maryland women who have recently delivered live born infants are surveyed by mail or by telephone, and responses are weighted to make the results representative of all Maryland births. This report is based on the responses of 2,990 Maryland mothers who delivered live infants between September 2018 and December 2020 and completed the supplemental disability questionnaire.

Limitations

Although estimates for the associations between selected indicator variables and disability status are adjusted for demographics, it is possible that characteristics not collected by the survey may explain some of the associations seen in this report. Additionally, self-reporting disability status may be subject to underreporting and underrepresentation of birthing individuals with any disability.

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Production Team

Katelyn Mullins, MPH
Environmental Health Bureau
Maternal and Child Health Bureau
Maryland Department of Health



For more information:

Laurie Kettinger, M.S.
PRAMS Project Coordinator
Maternal and Child Health Bureau
Maryland Department of Health
201 W. Preston Street, 3rd floor
Baltimore, MD 21201
Phone: (410) 767-6713
Fax: (410) 333-5233
www.marylandprams.org



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Wes Moore, Governor; Aruna Miller, Lt. Governor; Laura Herrera Scott, MD, MPH, Acting Secretary